

UNITED STATES DISTRICT COURT FOR THE  
WESTERN DISTRICT OF TEXAS  
AUSTIN DIVISION

IN RE CASSAVA SCIENCES, INC.  
SECURITIES LITIGATION

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This Document Relates to:

ALL ACTIONS.  
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Master File No. 1:21-cv-00751-DAE

CLASS ACTION

**REPORT AND RECOMMENDATION**  
**OF THE UNITED STATES MAGISTRATE JUDGE**

**TO: THE HONORABLE DAVID A. EZRA**  
**SENIOR UNITED STATES DISTRICT JUDGE**

Now before the Court are Plaintiffs’ Opposed Motion for Class Certification, filed March 13, 2024 (Dkt. 148); Defendants’ Motion Requesting Evidentiary Hearing on Plaintiffs’ Motion for Class Certification, filed October 7, 2024 (Dkt. 228); and the associated response and reply briefs.<sup>1</sup>

**I. Background**

Named Plaintiffs Mohammad Bozorgi, Ken Calderone, and Manohar Rao (“Plaintiffs”) bring this securities fraud class action against Defendants Cassava Sciences, Inc. (“Cassava”) and its executives Remi Barbier, Dr. Lindsay Burns, Dr. Nadav Friedmann, and Eric Schoen (“Individual Defendants”). Plaintiffs seek to certify a class of all purchasers of Cassava common stock and call options between September 14, 2020 and October 12, 2023 (“Class Period”).

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<sup>1</sup> By Text Orders issued March 15, 2024 and October 8, 2024, the District Court referred these motions to this Magistrate Judge for disposition of the Motion for Evidentiary Hearing and report and recommendation on the Motion for Class Certification, pursuant to 28 U.S.C. § 636(b), Federal Rule of Civil Procedure 72, and Rule 1 of Appendix C of the Local Court Rules of the United States District Court for the Western District of Texas.

## A. Allegations

Plaintiffs allege the following in their Supplemented Consolidated Complaint (Dkt. 176) (“Complaint”) and pleadings:

Cassava is a small Austin, Texas-based clinical-stage biopharmaceutical company engaged in developing drugs for the treatment of neurodegenerative diseases, such as Alzheimer’s disease. Dkt. 176 ¶ 73. During the Class Period, Cassava’s common stock traded on the NASDAQ Stock Market under the name “SAVA.” *Id.* ¶ 55. In 2011, Cassava developed its lead product candidate, simufilam, “an experimental small molecule drug for the treatment of Alzheimer’s.” *Id.* ¶ 80. Because millions of people worldwide suffer from Alzheimer’s disease, analysts estimated that, “if successful, simufilam could generate nearly \$10 billion in annual revenue by 2033.” *Id.* ¶ 81.

Since Cassava commenced operations in 1998, however, neither it nor its predecessor, Pain Therapeutics, has “produced a single drug approved for commercial sale or generated any revenue from product sales.” *Id.* ¶ 82. Cassava has incurred “significant net losses in each period since [its] inception.” *Id.* It is therefore “heavily dependent on the success of simufilam,” and if its “product candidates do not receive regulatory approval, Cassava will be unable to generate product revenue.” *Id.*

In September 2019, Cassava conducted a Phase 2b study to assess simufilam’s efficacy. On May 15, 2020, Cassava announced that the Phase 2b study was unsuccessful, and its stock price fell sharply. *Id.* ¶ 90. The Individual Defendants “were incentivized to pump up Cassava’s stock price following the unsuccessful Phase 2b results.” *Id.* ¶ 91. Plaintiffs allege that between September 14, 2020 and October 12, 2023, Defendants engaged in a fraudulent scheme to promote simufilam “by concealing facts that undermined the integrity of Cassava’s research.” Dkt. 148 at 10. Defendants used research tainted by extensive data manipulation to obtain National Institutes of Health (“NIH”) grants and publish in peer-reviewed journals as part of a strategy to validate its

“unique scientific approach.” Dkt. 176 ¶¶ 85-88, 144-222. Defendants then exploited their relationship with the NIH and academic journals to entice the market, telling investors: “You don’t have to take our word for it. The underlying science is published in a number of peer reviewed journals and benefits from multiple recent clinical and non-clinical research grants from the NIH.” *Id.* ¶ 280.

“Throughout the Class Period, Defendants carried out their scheme, repeatedly assuring investors of simufilam’s results, while failing to disclose that Cassava’s research was built on concealed data manipulation, significant anomalies, and intractable conflicts of interest.” Dkt. 148 at 10. On September 14, 2020, Cassava filed a Form 8-K with the SEC and attached a press release announcing that an “outside lab” conducted a “reanalysis” of Cassava’s previously failed Phase 2b clinical trial and “found significant improvement in Alzheimer’s biomarkers – the exact opposite of the initial analysis.” *Id.* at 11. Defendants then declared the original unsuccessful results invalid due to “anomalous data.” *Id.* But they concealed that the Phase 2b “reanalysis” results were themselves anomalous and built on flawed science to capture cash payments tied to short-term increases in Cassava’s stock price. *Id.* The Phase 2b reanalysis was conducted not by an outside lab but by Dr. Hoau-Yan Wang, “a highly conflicted member of Cassava’s own product development team on the Company’s payroll.”<sup>2</sup> *Id.*

After the press release and an investor conference call, Cassava’s stock price increased 133.4% or \$4.43 per share, from \$3.32 to \$7.75, on September 14, 2020. Dkt. 176 ¶ 279. Over the next few months, Defendants continued to tout the effectiveness of simufilam in press releases, SEC filings, and scientific journals. *Id.* ¶¶ 280-95. After each of these public statements, Cassava’s

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<sup>2</sup> Wang is an Associate Medical Professor at the City University of New York (“CUNY”) School of Medicine and is a member of Cassava’s scientific advisory board, a Cassava consultant, and the co-inventor of simufilam. Dkt. 176 ¶ 57.

stock skyrocketed. *Id.* For example, a little over a week after Cassava’s February 2, 2021 press release, Cassava’s stock rose approximately 383%. *Id.* ¶ 296.

Defendants made false and misleading statements about simufilam studies at health conferences in April and June 2021. *Id.* ¶¶ 306-11. On July 26, 2021, Defendants presented the Phase 2b trial results at an Alzheimer’s Association International Conference (“AAIC”) and issued a press release. *Id.* ¶¶ 218, 219, 312-14. The presentation and press release contained false and misleading statements and concealed the removal of a “key” biomarker data point, a “serious and intentional action” that inflated the significance of the results. Dkt. 148 at 11.

On August 18, 2021, attorney Jordan A. Thomas filed a Citizen Petition with the FDA on behalf of then-unnamed individuals, citing “grave concerns about the quality and integrity of the laboratory-based studies surrounding this drug candidate.” Dkt. 176 ¶ 105. The petition contained a 42-page technical report, later revealed to have been created by two scientists, Drs. David Bredt and Geoffrey Pitt, outlining “a series of anomalies” in Cassava’s published research “that strongly suggests systemic data manipulation.” *Id.* Shortly after the Citizen Petition was publicized, members of the scientific community began reviewing the petition’s findings and validating the concerns it raised, as well as identifying “new errors and anomalies that strongly suggest scientific misconduct in their reports about both preclinical and clinical data.” *Id.* ¶ 105.

On August 25, 2021, Cassava issued a press release in response to the Citizen Petition denying all wrongdoing and calling the petition “fiction.” *Id.* The release stated that the plasma p-tau data presented to the AAIC “was generated by Quanterix, an independent company.” *Id.* ¶¶ 316-17. Despite Cassava’s denials of wrongdoing, its stock price fell 39.9% between August 25 and August 26, 2021. *Id.* ¶¶ 15, 497.

On August 27, 2021, Quanterix issued a press release clarifying that it “did not interpret the test results or prepare the data charts presented by Cassava” in the AAIC presentation. *Id.* ¶¶ 16, 323. On this news, Cassava’s share price fell 17.66%. *Id.* ¶¶ 17, 499. “Defendants sought to stem the losses, and again provided doctored data to the scientific journals investigating the misconduct allegations in order to obtain exonerations that Defendants then disseminated to the market.” Dkt. 148 at 12.

On October 12, 2023, an article in *Science* magazine released the results of a CUNY investigation into the alleged misconduct at Wang’s lab. *Id.* The article “revealed that no original data had been provided by Burns or Wang in the investigation, thus revealing not only that Defendants could not have provided original data to the journals, as Cassava claimed, but that there was no original data for any of the Cassava research at issue.” *Id.* Cassava’s stock price again fell over 30%, “further damaging Class members and ending the Class Period.” *Id.*

## **B. Procedural History**

On August 27, 2021, Plaintiff Pierre Brazeau filed in this Court the first securities fraud class action against Cassava, which was followed by four more. Dkt. 1. On June 30, 2022, the District Court consolidated the cases and appointed Mohammad Bozorgi as Lead Plaintiff and Robbins Geller Rudman & Dowd LLP (“Robbins Geller”) as Lead Counsel. Dkts. 58-59.

In their Complaint, Plaintiffs assert two securities fraud claims against Defendants under the Securities Exchange Act of 1934 (“Exchange Act”): (1) a claim against all Defendants under § 10(a) and its implementing rule, Rule 10b-5, which prohibit material misrepresentations and omissions in connection with the sale of securities; and (2) a control liability claim against the Individual Defendants under § 20(a) of the Exchange Act, 15 U.S.C. § 78t(a). Plaintiffs seek monetary damages and attorney’s fees and costs.

On October 25, 2022, Defendants moved to dismiss Plaintiffs' claims under Rule 12(b)(6). Dkt. 81. The District Court denied the motion on all grounds except as to Defendant Friedmann; because he died after this case was filed, he was dismissed under Rule 25(a)(1). Dkt. 104 at 32.

On August 5, 2024, the District Court appointed U.S. Magistrate Judge Henry Bemporad as Special Discovery Master to handle discovery disputes. Dkt. 203 at 2.

On June 27, 2024, Wang was indicted in U.S. District Court for the District of Maryland on felony charges of major fraud against the United States, wire fraud, and making false statements. *United States v. Hoau-Yan Wang*, No. 8:24-cr-00211-TDC (D. Md. June 27, 2024). The indictment alleges that Wang fabricated simufilam research results to obtain funding from the NIH.

On September 26, 2024, the SEC filed securities fraud charges against Defendants Cassava, Barbier, and Burns. *SEC v. Cassava Scis., Inc.*, No. 1:24-cv-01150-DAE (W.D. Tex. Sept. 26, 2024). The parties settled. *Id.* at Dkt. 3. Defendants are enjoined from violating securities laws and must pay civil penalties of \$40 million (Cassava), \$175,000 (Barbier), and \$85,000 (Burns). *Id.* at Dkts. 5-7.

### **C. Motion for Class Certification**

Plaintiffs move for class certification under Rule 23 and ask the Court to (1) certify a class of all purchasers of Cassava Securities during the Class Period; (2) appoint Plaintiffs as Class Representatives; and (3) appoint Lead Counsel Robbins Geller to serve as Class Counsel. Dkt. 148. at 8. Defendants oppose the Motion, arguing that Plaintiffs have not met all Rule 23 requirements.

## **II. Defendants' Motion for Evidentiary Hearing**

Defendants request an evidentiary hearing on Plaintiffs' Motion for Class Certification, arguing that "class certification proceedings in this case raise novel, complex issues" and that the Court "would benefit from hearing from the parties' counsel and witnesses live, with each side permitted to cross-examine the other side's witnesses." Dkt. 228 at 2. Plaintiffs take no position

on Defendants’ request, but respond that the issues presented here are not novel; “class certification in this case is more straightforward than most securities fraud class actions, as there are no real disputes regarding the salient evidence”; and “it is more common for securities class actions to be certified without an evidentiary hearing.” Dkt. 229 at 2-3.

“In determining whether a suit may be maintainable as a class action, a district court is not obliged to conduct an evidentiary hearing.” *Bradford v. Sears, Roebuck & Co.*, 673 F.2d 792, 795-96 (5th Cir. 1982); *see also* 7AA MARY KAY KANE, FEDERAL PRACTICE AND PROCEDURE (“WRIGHT & MILLER”) § 1785 (3d ed. June 2024 Update) (“In making the certification decision, courts generally agree that there is no absolute requirement that a preliminary hearing be held.”). That said, a hearing may be necessary if a material question is raised about any of the Rule 23 elements. *Id.*

Although evidentiary hearings have often been used before the certification determination, they are by no means required and are usually employed to assist the plaintiffs in demonstrating the existence of the class. The court need not resort to an evidentiary hearing in the certification stage of a class action where the record itself is sufficient to make the determination. The certification of the class is not an immutable decision, and if it later appears that the plaintiff fails to meet any of the requirements of Rule 23 the certification may be withdrawn.

32B AM. JUR. 2D FEDERAL COURTS § 1478 (Aug. 2024 Update).

The parties have submitted thousands of pages of briefing and evidence on the issue of class certification. Dkts. 148, 214, 227, 231, 245, 246. The Court finds that an evidentiary hearing is unnecessary because the pleadings and evidence submitted show that a class should be certified. *See Pedigo v. 3003 S. Lamar, LLP*, 666 F. Supp. 2d 693, 694 n.1 (W.D. Tex. 2009) (“[T]he Court is of the opinion that the issues determining whether a class can be conditionally certified are clear enough such that an evidentiary hearing is unnecessary.”). Accordingly, Defendants’ Motion for an Evidentiary Hearing (Dkt. 228) is **DENIED**.

### III. Legal Standards

The class action lawsuit is “an exception to the usual rule that litigation is conducted by and on behalf of the individual named parties only.” *Califano v. Yamasaki*, 442 U.S. 682, 700-01 (1979). To “justify a departure from that rule, a class representative must be part of the class and possess the same interest and suffer the same injury as the class members.” *Wal-Mart Stores, Inc. v. Dukes*, 564 U.S. 338, 348-49 (2011) (citation omitted). Rule 23, which governs certification of class actions, “ensures that the named plaintiffs are appropriate representatives of the class whose claims they wish to litigate.” *Id.* at 349.

Under Rule 23(a), the party seeking certification of a class action must first demonstrate that (1) the class is so numerous that joinder of all members is impracticable; (2) there are questions of law or fact common to the class; (3) the claims or defenses of the representative parties are typical of the claims or defenses of the class; and (4) the representative parties will fairly and adequately protect the interests of the class. If the proposed class meets all those elements, the moving party must satisfy at least one of the three requirements listed in Rule 23(b). *Dukes*, 564 U.S. at 345. Plaintiffs here rely on Rule 23(b)(3), which requires “that the questions of law or fact common to class members predominate over any questions affecting only individual members, and that a class action is superior to other available methods for fairly and efficiently adjudicating the controversy.”

District courts have “substantial discretion in determining whether to certify a class action.” *Allison v. Citgo Petroleum Corp.*, 151 F.3d 402, 408 (5th Cir. 1998). A district court’s decision to certify a class is reviewed for abuse of discretion, “in recognition of the essentially factual basis of the certification inquiry and of the district court’s inherent power to manage and control pending litigation.” *Sampson v. United Servs. Auto. Ass’n*, 83 F.4th 414, 418 (5th Cir. 2023) (citation omitted). A district court’s class certification analysis must be “rigorous” and may “entail some

overlap with the merits of the plaintiff’s underlying claim,” *Dukes*, 564 U.S. at 351. But Rule 23 “grants courts no license to engage in free-ranging merits inquiries at the certification stage. Merits questions may be considered to the extent—but only to the extent—that they are relevant to determining whether the Rule 23 prerequisites for class certification are satisfied.” *Amgen Inc. v. Connecticut Ret. Plans & Tr. Funds*, 568 U.S. 455, 466 (2013).

Rule 23 “is a remedial rule which should be construed liberally to permit class actions, especially in the context of securities fraud suits, where the class action device can prove effective in deterring illegal activity.” *In re Enron Corp. Secs.*, 529 F. Supp. 2d 644, 670 (S.D. Tex. 2006) (quoting *Longden v. Sunderman*, 123 F.R.D. 547, 551 (N.D. Tex. 1988)); *see also Simon v. Merrill Lynch, Pierce, Fenner & Smith, Inc.*, 482 F.2d 880, 883 (5th Cir. 1973) (“We recognize that the Rule 23(b)(3) suit has been one of the principal weapons against fraud in securities transactions.”); *Shaw v. Toshiba Am. Info. Sys., Inc.*, 91 F. Supp. 2d 942, 958 (E.D. Tex. 2000) (“Class certification in securities cases is practically routine.”).

#### **IV. Threshold Requirements**

Plaintiffs seek to certify “a class of all purchasers or acquirers of Cassava common stock or call options on Cassava common or sellers of put options on Cassava common stock (‘Cassava Securities’) between September 14, 2020 and October 12, 2023.” Dkt. 148 at 12. Plaintiffs argue that they have met all the threshold requirements (numerosity, commonality, typicality and adequacy of representation) under Rule 23(a). They submit an Expert Report (Dkt. 148-7) and Rebuttal Expert Report (Dkt. 209-5) from Professor Steven P. Feinstein, Ph.D. Defendants dispute only typicality and rely on an Expert Report from Dr. Rene M. Stulz, Ph.D. (Dkt. 242 at 6-158).

Although Defendants dispute only the typicality requirement, the Court must determine whether Plaintiffs have satisfied each of the requirements under Rule 23(a). *See Vizena v. Union Pac. R. Co.*, 360 F.3d 496, 503 (5th Cir. 2004) (“[I]t is improper for a district court to certify a

class action without first demonstrating that the plaintiff has satisfied each of the requirements of Rule 23.”); *Stirman v. Exxon Corp.*, 280 F.3d 554, 563 (5th Cir. 2002) (“Even if [Defendant] had stipulated to certification, the court was bound to conduct its own thorough Rule 23(a) inquiry.”).

#### **A. Numerosity**

To meet the numerosity requirement, Plaintiffs must show that “the class is so numerous that joinder of all members is impracticable.” FED. R. CIV. P. 23(a)(1). “Plaintiffs need not prove the precise number of members in a class, but ‘must ordinarily demonstrate some evidence or a reasonable estimate of the number of purported class members.’” *Enron*, 529 F. Supp. 2d at 672 (quoting *Zeidman v. J. Ray McDermott & Co.*, 651 F.2d 1030, 1038 (5th Cir. 1981)). This prerequisite “is generally assumed to have been met in class action suits involving nationally traded securities.” *Zeidman*, 651 F.2d at 1039.

The Proposed Class consists of “all purchasers or acquirers” of Cassava Securities between September 14, 2020 and October 12, 2023. Dkt. 148 at 12. Plaintiffs submit evidence that during the Class Period, Cassava common stock traded on the NASDAQ with an average weekly trading volume of 17.2 million shares and at least 443 institutional shareholders, suggesting a potentially massive class of individual investors. Dkt. 148-7 ¶¶ 80, 89, 100. This evidence shows that the Proposed Class is sufficiently numerous that joinder of all class members is impracticable. *See Rooney v. EZCORP, Inc.*, 330 F.R.D. 439, 445 (W.D. Tex. 2019) (numerosity requirement met when defendant had more than 50 million shares of common stock outstanding and the average weekly trading volume on NASDAQ was roughly 2.7 million shares); *KB Partners I, L.P. v. Barbier*, No. A-11-CA-1034-SS, 2013 WL 2443217, at \*11 (W.D. Tex. June 4, 2013) (numerosity requirement met when two million shares of common stock were traded on NASDAQ weekly); *Lehocky v. Tidel Techs., Inc.*, 220 F.R.D. 491, 499 (S.D. Tex. 2004) (numerosity requirement met when corporation had more than 17 million shares of common stock outstanding).

## B. Commonality

Commonality requires “questions of law or fact common to the class.” FED. R. CIV. P. 23(a)(2). It requires “a common legal contention capable of class-wide resolution.” *Flecha v. Medicredit, Inc.*, 946 F.3d 762, 767 (5th Cir. 2020) (citing *Dukes*, 564 U.S. at 349-50).

Plaintiffs assert claims under §§ 10(b) and 20(a) of the Exchange Act and Rule 10b-5, alleging that they and the Proposed Class paid artificially inflated prices for Cassava Securities based on Defendants’ false and misleading statements about simufilam. Plaintiffs contend that they and the Proposed Class would not have purchased or acquired Cassava Securities at the prices they paid – or at all – had they been aware that the market prices were artificially and falsely inflated by Defendants’ misleading statements. Plaintiffs allege that as result of Defendants’ wrongful conduct, they and the Proposed Class suffered damages in connection with their purchases or acquisitions of Cassava Securities during the Class Period. These allegations implicate multiple questions of law and fact common to the Class, including (1) whether Defendants violated the Exchange Act and Rule 10b-5; (2) whether Defendants omitted or misrepresented material facts; (3) whether the price of Cassava Securities was artificially inflated during the Class Period; (4) whether the Individual Defendants were control persons under §20(a); and (5) whether the Proposed Class members suffered damages.

The Court finds that there are common questions of law and fact sufficient to meet the commonality element. *See Rooney*, 330 F.R.D. at 445-46 (finding commonality in securities fraud allegations when allegations implicated common questions to the class, including whether Defendants violated securities laws, whether Defendants acted with scienter, and the extent to which market price was affected by various public statements and disclosures); *Barbier*, 2013 WL 2443217, at \*11 (finding commonality satisfied when “every class member’s allegations of securities fraud arise from the same basic set of facts”).

### C. Typicality

The typicality requirement demands that “the claims or defenses of the representative parties are typical of the claims or defenses of the class.” FED. R. CIV. P. 23(a). The test for typicality “is not demanding.” *Mullen v. Treasure Chest Casino, LLC*, 186 F.3d 620, 625 (5th Cir. 1999). Typicality “focuses on the similarity between the named plaintiffs’ legal and remedial theories and the legal and remedial theories of those whom they purport to represent.” *Stirman v. Exxon Corp.*, 280 F.3d 554, 562 (5th Cir. 2002) (citation omitted).

A complete identity of claims is not required; rather, the critical inquiry is whether the named plaintiff’s claims have the same essential characteristics of those of the putative class. If the claims arise from a similar course of conduct and share the same legal theory, factual differences will not defeat typicality.

*Angell v. GEICO Advantage Ins.*, 67 F.4th 727, 736 (5th Cir. 2023) (cleaned up); *see also Ibe v. Jones*, 836 F.3d 516, 528-29 (5th Cir. 2016) (“The typicality inquiry rests less on the relative strengths of the named and unnamed plaintiffs’ cases than on the similarity of legal and remedial theories behind their claims.”).

Defendants argue that Plaintiffs’ claims are atypical of the Class because unlike the Proposed Class members, Plaintiffs “did *not* purchase Cassava stocks or options in reliance on Defendants’ representations.” Dkt. 241 at 41. Defendants assert that “Plaintiffs instead placed reckless, short-term bets hoping to profit off Cassava’s volatility. These high-risk trades—which frequently involved holding positions for less than a day—were disconnected from any representations by Defendants.” *Id.* They contend that Plaintiffs’ trading behavior “confirms that each named Plaintiff was a meme stock trader out to make a quick buck.” *Id.* For example, Defendants point out that Plaintiff Calderone continued to buy Cassava stock after this case was filed because he believed the stock was undervalued. *Id.* at 45. Defendants also argue that Plaintiffs’ damages claims raise unique issues atypical of the class, arguing that Calderone’s damages stemmed from the July 30,

2021 stock drop, which was not associated with any alleged misrepresentation; Bozorgi's damages were caused by his broker liquidating his Cassava stock at an inopportune time; and Rao's losses were attributable to his risky options bet. Dkt. 241 at 46. Defendants argue that Plaintiffs' "trading patterns 'raise individualized questions regarding why they made their investments . . . and whether they have negative loss causation,' defeating typicality." *Id.* (quoting *IBEW Loc. 90 Pension Fund v. Deutsche Bank AG*, 2013 WL 5815472, at \*22 (S.D.N.Y. Oct. 29, 2013)).

The Court finds that Defendants' allegations do not defeat typicality. First, the District Court has rejected Defendants' arguments that Plaintiffs' claims are atypical of the Class because they are "day traders" and "in-and-out" traders. *See* Order Appointing Lead Plaintiff, Dkt. 59 at 10 ("Mr. Barsa fails to show that Mr. Bozorgi's twenty-seven trades during a 347-day class period constitutes in-and-out trading or makes him a day trader such that he lacks typicality or adequacy."). Nor does the presence of an arguably unique defense necessarily destroy typicality. *Feder v. Elec. Data Sys. Corp.*, 429 F.3d 125, 137 (5th Cir. 2005). While Plaintiffs' damages may be different than some of the Proposed Class, "such differences are typical in securities-fraud cases and do not render a lead plaintiff atypical." *Barbier*, 2013 WL 2443217, at \*13 (rejecting argument that named plaintiff's damages were atypical of class because he was forced to sell his shares due to a margin call) (collecting cases).

Courts have rejected Defendants' argument that the purchase of a company's stock after disclosure of alleged fraud necessarily precludes typicality. *See Feder*, 429 F.3d at 138 ("We reject the argument that a proposed class representative in a fraud-on-the-market securities suit is as a matter of law categorically precluded from meeting the requirements of Rule 23(a) simply because of a post-disclosure purchase of the defendant company's stock.").<sup>3</sup> Courts have also rejected

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<sup>3</sup> *See also In re NIO, Inc. Secs. Litig.*, No. 19-CV-1424-NGG, 2023 WL 5048615, at \*8 (E.D.N.Y. Aug. 8, 2023) ("[T]he court determines that [plaintiff's] post-class period trading does not give rise to a unique

arguments that the named plaintiffs and proposed class both must have relied on misrepresentations to show typicality. “Even in the absence of direct reliance . . . investors may rely on the fraud-on-the-market theory to establish the reliance element.” *Barbier*, 2013 WL 2443217, at \*11 (rejecting argument that plaintiff’s direct reliance on alleged misrepresentations made him atypical of the class when proposed class relied on fraud on the market theory). Because Plaintiffs rely on the fraud on the market theory, Defendants’ argument is misplaced.

The Court finds that Plaintiffs’ claims are typical of the Proposed Class because the claims arise from the same alleged fraudulent scheme by Defendants and are based on the same legal theories. *See Angell*, 67 F.4th at 736 (“If the claims arise from a similar course of conduct and share the same legal theory, factual differences will not defeat typicality.”). As stated, complete identity of claims is not required to show typicality. *Id.*

#### **D. Adequacy of Representation**

To meet the adequacy requirement, Plaintiffs must show that they “will fairly and adequately protect the interests of the class.” FED. R. CIV. P. 23(a). Courts consider three factors when adjudging the adequacy of named plaintiffs: (1) the zeal and competence of the representatives’ counsel; (2) the willingness and ability of the representatives to take an active role in and control the litigation and to protect the interests of absentees; and (3) the risk of conflicts of interest between the named plaintiffs and the class they seek to represent. *Angell*, 67 F.4th at 737.

The Court finds that all three factors are satisfied. Plaintiffs’ interests are identical to the interests of the Proposed Class, and no conflicts have been identified by the parties. Plaintiffs have

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defense, let alone one that would distract from the trial.”); *Lehocky*, 220 F.R.D. at 501-02 (finding that “courts have ruled that purchases of stock by the class representatives after negative announcements during the class period or even after the close of the class period do not destroy typicality” and that “the key typicality inquiry is whether a class representative would be required to devote considerable time to rebut Defendants’ claims.”); *Rubenstein v. Collins*, 162 F.R.D. 534, 538 (S.D. Tex. 1995) (rejecting defendant’s argument that plaintiffs were atypical of class because they were sophisticated investors).

also shown a willingness and ability to take an active role in and control the litigation and protect the interests of the Proposed Class over three years of this litigation. And Plaintiffs’ attorneys have extensive experience litigating securities’ fraud class actions. Courts in this District have found them to be zealous and competent counsel.<sup>4</sup>

## V. Predominance

Because Plaintiffs have met the threshold requirements under Rule 23(a), the Court next determines whether Plaintiffs satisfy the predominance and superiority elements.

Rule 23(b)(3) requires that, before a class is certified under that subsection, a court must find that “questions of law or fact common to class members predominate over any questions affecting only individual members.” The predominance inquiry “tests whether proposed classes are sufficiently cohesive to warrant adjudication by representation.” *Amchem Prods., Inc. v. Windsor*, 521 U.S. 591, 623 (1997).

This calls upon courts to give careful scrutiny to the relation between common and individual questions in a case. An individual question is one where members of a proposed class will need to present evidence that varies from member to member, while a common question is one where the same evidence will suffice for each member to make a prima facie showing or the issue is susceptible to generalized, class-wide proof. . . . When one or more of the central issues in the action are common to the class and can be said to predominate, the action may be considered proper under Rule 23(b)(3) even though other important matters will have to be tried separately, such as damages or some affirmative defenses peculiar to some individual class members.

*Tyson Foods, Inc. v. Bouaphakeo*, 577 U.S. 442, 453 (2016) (cleaned up).

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<sup>4</sup> See Firm Resume, Dkt. 148-6; Order Appointing Lead Plaintiff and Approving Selection of Counsel, Dkt. 59 at 10-11 (“Mr. Bozorgi selected Robbins Geller as lead counsel in this case, and the Court is convinced the firm is fully capable of litigating this case skillfully and zealously.”); *City of Pontiac Gen. Emps. ’ Ret. Sys. v. Dell Inc.*, No. A-15-CV-374-LY, 2018 WL 1558571, at \*4 (W.D. Tex. Mar. 29, 2018) (finding that plaintiffs met adequacy requirement where Robbins Geller represented class as class counsel).

The predominance analysis “entails identifying the substantive issues that will control the outcome, assessing which issues will predominate, and then determining whether the issues are common to the class, a process that ultimately prevents the class from degenerating into a series of individual trials.” *Chavez v. Plan Benefit Servs., Inc.*, 108 F.4th 297, 316 (5th Cir. 2024) (quoting *Bell Atl. Corp. v. AT&T Corp.*, 339 F.3d 294, 302 (5th Cir. 2003)). The predominance requirement, “though redolent of the commonality requirement of Rule 23(a), is ‘far more demanding’ because it ‘tests whether proposed classes are sufficiently cohesive to warrant adjudication by representation.’” *Id.* (quoting *Gene & Gene LLC v. BioPay LLC*, 541 F.3d 318, 326 (5th Cir. 2008)).

#### **A. Substantive Issues in Dispute**

As stated, Plaintiffs assert claims under Section 10(b) of the Exchange Act, its implementing regulation Rule 10b-5, and Section 20(a) of the Exchange Act. The substantive issues that will control the outcome of this case are the required elements under each of these claims.

##### **1. Section 20(a)**

Plaintiffs assert a control-person liability claim against the Individual Defendants under § 20(a) of the Exchange Act: “Every person who, directly or indirectly, controls any person liable under any provision of this chapter or of any rule or regulation thereunder shall also be liable jointly and severally with and to the same extent as such controlled person to any person to whom such controlled person is liable.” 15 U.S.C. § 78t(a). Section 20(a) is a secondary liability provision, so Plaintiffs must establish a primary violation under § 10(b) before liability arises under § 20(a). *Alaska Elec. Pension Fund v. Flotek Indus., Inc.*, 915 F.3d 975, 986 (5th Cir. 2019). If predominance is satisfied with respect to the Section 10(b) claim, it is also satisfied for the Section 20(a) claim. *In re Synchrony Fin. Secs. Litig.*, No. 3:18-CV-1818 (VAB), 2023 WL 1503032, at \*7 n.3 (D. Conn. Feb. 3, 2023); *see also Rougier v. Applied Optoelectronics, Inc.*,

No. 4:17-CV-02399, 2019 WL 6111303, at \*8 (S.D. Tex. Nov. 13, 2019) (“Because § 20(a) requires proof of an underlying violation of § 10(b) and Rule 10b-5, the elements of the claims overlap and will be subject to the same class-wide proof.”), *R. & R. adopted*, 2019 WL 7020349 (S.D. Tex. Dec. 20, 2019). The Court focuses its inquiry on the § 10(b) claim. In addition, the substantive issue of whether the Individual Defendants had actual power over Cassava and participated in or induced the fraud “will be proven by the Individual Defendants’ conduct, not by the conduct of any Class Members.” *Rougier*, 2019 WL 6111303, at \*8. Common questions of law and fact will predominate with respect to Section 20(a) claims. *Id.*

## **2. Section 10(b)**

To recover for violations of § 10(b) and Rule 10b-5, which prohibit material misstatements or omissions in connection with the purchase or sale of any security, Plaintiffs must prove (1) a material misrepresentation or omission by Defendants (2) made with scienter; (3) a connection between the misrepresentation or omission and the purchase or sale of a security; (4) reliance on the misrepresentation; (5) economic loss; and (6) loss causation.<sup>5</sup> *Amgen*, 568 U.S. at 461. Defendants do not dispute that Plaintiffs have met the first three elements, but argue that Plaintiffs do not show common issues of fact and law will predominate as to the elements of reliance and economic loss.

## **B. Reliance**

Whether common questions of law or fact predominate in a securities fraud action often turns on the element of reliance. *Halliburton I*, 563 U.S. at 810.

Reliance by the plaintiff upon the defendant’s deceptive acts is an essential element of the § 10(b) private cause of action. This is because proof of reliance ensures that there is a proper connection between a defendant’s misrepresentation and a plaintiff’s injury.

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<sup>5</sup> Plaintiffs need not show loss causation at the class certification stage. *Erica P. John Fund, Inc. v. Halliburton Co.*, 563 U.S. 804, 813 (2011) (*Halliburton I*).

The traditional (and most direct) way a plaintiff can demonstrate reliance is by showing that he was aware of a company's statement and engaged in a relevant transaction—*e.g.*, purchasing common stock—based on that specific misrepresentation. In that situation, the plaintiff plainly would have relied on the company's deceptive conduct. A plaintiff unaware of the relevant statement, on the other hand, could not establish reliance on that basis.

*Id.* (citations omitted).

Investors may prove reliance under Section 10(b) of the Exchange Act by invoking a rebuttable presumption of reliance based on the fraud on the market theory, which holds that “the market price of shares traded on well-developed markets reflects all publicly available information, and, hence, any material misrepresentations.” *Basic Inc. v. Levinson*, 485 U.S. 224, 246 (1988). Rather than scrutinize every piece of public information about a company, an investor “who buys or sells stock at the price set by the market does so in reliance on the integrity of that price” – the belief that it reflects all public, material information. *Id.* at 247. As a result, whenever the investor buys or sells stock at the market price, the investor’s “reliance on any public material misrepresentations . . . may be presumed for purposes of a Rule 10b-5 action.” *Id.*

To invoke the *Basic* presumption of reliance, a plaintiff must demonstrate: “(1) that the alleged misrepresentations were publicly known, (2) that they were material, (3) that the stock traded in an efficient market, and (4) that the plaintiff traded the stock between the time the misrepresentations were made and when the truth was revealed.” *Halliburton Co. v. Erica P. John Fund, Inc.*, 573 U.S. 258, 268 (2014) (*Halliburton II*). The presumption of reliance is rebuttable. *Id.* A defendant “may rebut the presumption at class certification by showing ‘that an alleged misrepresentation did not actually affect the market price of the stock.’” *Goldman Sachs Grp., Inc. v. Arkansas Tchr. Ret. Sys.*, 594 U.S. 113, 119 (2021) (quoting *Basic*, 485 U.S. at 248). The defendant bears the burden of persuasion to prove lack of price impact. *Id.*

### 1. *Basic* Factors

Plaintiffs argue that they have met all relevant *Basic* factors<sup>6</sup> and are entitled to a classwide fraud on the market presumption of reliance. Defendants do not dispute, and the Court finds, that Plaintiffs have established the first and fourth *Basic* requirements: The alleged misrepresentations by Defendants were publicly made,<sup>7</sup> and Plaintiffs purchased Cassava Securities after the alleged misrepresentations were made.<sup>8</sup> But Defendants argue that Plaintiffs have not shown that Cassava Securities were traded in an “efficient market” during the Class Period.

An efficient capital market is one in which the price of the stock at a given time is the best estimate of its future price. *Finkel v. Docutel/Olivetti Corp.*, 817 F.2d 356, 360 n.8 (5th Cir. 1987). “Hence, in an efficient market, a stock’s price remains relatively stable in the absence of news, and changes very rapidly as the market receives new and unexpected information.” *Krogman v. Sterritt*, 202 F.R.D. 467, 477 (N.D. Tex. 2001). “Absent an efficient market, individual reliance by each plaintiff must be proven, and the proposed class will fail the predominance requirement.” *Unger v. Amedisys Inc.*, 401 F.3d 316, 322 (5th Cir. 2005).

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<sup>6</sup> The Supreme Court clarified in *Golman Sachs* that class action plaintiffs need only prove the prerequisites of publicity, market efficiency, and market timing before class certification, while the materiality element “should be left to the merits stage.” 594 U.S. at 119.

<sup>7</sup> Plaintiffs show that Defendants made repeated public misrepresentations about simufilam in press releases, presentations and conference calls, SEC filings, and published papers and journals during the Class Period. Dkt. 176 ¶¶ 268-362, 386-419 (summary of misrepresentations made in press releases, conference calls, SEC filings, and published papers and journals); Dkt. 209-6-209-9 (Cassava’s press releases); Dkt. 148-7 at 15-20 (Feinstein’s summary of misrepresentations). *See Rooney*, 330 F.R.D. at 448 (plaintiffs met publicly known element when misrepresentations were made in company press releases, SEC filings, and conference calls).

<sup>8</sup> Plaintiffs show that they purchased Cassava Securities after Defendants’ alleged misrepresentations. Dkt. 148-3-148-5 ¶¶ 2 (declarations of stock purchases); Dkt. 176 ¶¶ 47, 52-54, 514-15 (allegations of stock purchases); *id.* at 179-84 (charts of stock purchases); Bozorgi Tr. at 196:23-197:5, Dkt. 209-13 at 6-7; Calderone Tr. at 168:1-170:25, Dkt. 209-14 at 6-8; Rao Tr. at 239:16-240:13, Dkt. 209-15 at 6-7 (testimony regarding stock purchases during Class Period). Plaintiffs have met the timing element. *See Rooney*, 330 F.R.D. at 449 (plaintiffs met timing element by specifying when misrepresentations were made and when they purchased stock).

Courts in the Fifth Circuit rely on several factors to determine whether a stock traded in an efficient market:

(1) the average weekly trading volume expressed as a percentage of total outstanding shares; (2) the number of securities analysts following and reporting on the stock; (3) the extent to which market makers and arbitrageurs trade in the stock; (4) the company's eligibility to file SEC registration Form S-3 (as opposed to Form S-1 or S-2); (5) the existence of empirical facts showing a cause and effect relationship between unexpected corporate events or financial releases and an immediate response in the stock price; (6) the company's market capitalization; (7) the bid-ask spread for stock sales; and (8) float, the stock's trading volume without counting insider-owned stock.

*Id.* at 323 (collecting factors from *Cammer v. Bloom*, 711 F. Supp. 1264, 1286-87 (D.N.J. 1989) and *Krogman*, 202 F.R.D. at 477-78) (“*Cammer/Krogman* factors”). These factors do “not represent an exhaustive list, and in some cases one of the above factors may be unnecessary.” *Id.* But “once a court endeavors to apply these factors, they must be weighed analytically, not merely counted, as each of them represents a distinct facet of market efficiency.” *Id.*

Relying on Feinstein's Expert Report, Dkt. 148-7 at 28-65, Plaintiffs argue that they have met all the *Cammer/Krogman* factors<sup>9</sup> and so have shown that Cassava Securities were traded in an efficient market. Defendants fail to address most of the *Cammer/Krogman* factors and instead argue that Feinstein's analysis of market efficiency is flawed because he did not consider whether Cassava's stock was a “meme stock.” Dkt. 241 at 7.

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<sup>9</sup> Before addressing these factors in their Motion, Plaintiffs argue that the Court should presume Cassava Securities traded in an efficient market because “throughout the Class Period, Cassava common stock traded on the NASDAQ Stock Market, one of the largest and most developed markets in the world.” Dkt. 148 at 19. But the Fifth Circuit has specifically rejected the argument that plaintiffs are exempted “in suits involving stocks traded on larger securities markets from the burden of making a preliminary showing of market efficiency at the class certification stage.” *Bell*, 422 F.3d at 313. So the Court must evaluate the relevant factors, but will consider the type of market on which Cassava stock traded under the third *Cammer/Krogman* factor.

Defendants define a meme stock as “a stock subject to extraordinary volatility due to viral social media attention by retail investors, divorced from the value of the underlying company.” *Id.* Defendants contend that the markets for meme stocks are inefficient because of “the potential for such activities to distort market dynamics and undermine fair and efficient price discovery mechanisms.” *Id.* They argue that “the *Cammer/Krogman* factors are of limited value in the meme stock context” and that Feinstein’s failure to consider whether Cassava was a meme stock undermines his finding of market efficiency. *Id.* at 22.

The Court finds Defendants’ meme stock argument to be legally and factually inaccurate. First, Defendants identify no Fifth Circuit case law stating that courts should not apply the *Cammer/Krogman* factors in securities fraud cases when the defendant argues that the stock was a meme stock or that the market was inefficient. In fact, courts have specifically rejected this argument. *See Shupe v. Rocket Cos.*, No. 1:21-CV-11528, 2024 WL 4349171, at \*20 (E.D. Mich. Sept. 30, 2024) (finding argument that plaintiffs’ expert’s market efficiency opinion based on application of *Cammer/Krogman* factors “was unreliable solely because he did not consider [defendant’s] meme-stock status lacks merit as a matter of law”); *Willis v. Big Lots, Inc.*, No. 2:12-CV-604, 2017 WL 1074048, at \*3-4 (S.D. Ohio Mar. 17, 2017) (rejecting defendant’s argument that plaintiff’s expert provided an improper legal opinion when relying on the *Cammer/Krogman* factors); *Carpenters Pension Tr. Fund of St. Louis v. Barclays PLC*, 310 F.R.D. 69, 82 (S.D.N.Y. 2015) (rejecting defendant’s argument that plaintiffs’ expert improperly “plod[ded] through” the *Cammer/Krogman* factors as “pointless” because those factors are “widely accepted” as relevant to market efficiency). And many district courts have accepted Feinstein’s *Cammer/Krogman* analysis to show market efficiency.<sup>10</sup>

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<sup>10</sup> *See, e.g., In re Synchrony Fin. Secs. Litig.*, 2023 WL 1503032, at \*9-\*11 (D. Conn. Feb. 3, 2023); *Pearlstein v. BlackBerry Ltd.*, 2021 WL 253453, at \*16-17 (S.D.N.Y. Jan. 26, 2021); *Monroe Cnty. Emps.’*

Second, while Stulz points out that some market participants characterized Cassava as a meme stock, he never states that Cassava stock indeed was one. *See, e.g.*, Dkt. 242 at 25 (“The Feinstein Report fails to address market commentary that attributed some of the large movements in Cassava’s price to ‘meme traders’ and some business press articles that explicitly characterized Cassava as a ‘meme stock’”). Stulz testified that he was “not offering an affirmative opinion that the market for Cassava stock was inefficient during the class period.” Stulz Tr. at 38:18-23, Dkt. 209-4 at 7. He also admitted that he has no evidence Cassava was a meme stock. *Id.* at 174:14-16, Dkt. 209-4 at 39 (“I don’t have a report saying that Cassava is a meme stock.”). Defendants’ criticism of Feinstein’s analysis on this basis is not persuasive. *See NIO*, 2023 WL 5048615, at \*13 (finding that defendants’ objections to event study were unpersuasive when they did not submit an expert opinion that the stock traded “in an *inefficient* market”); *W. Palm Beach Police Pension Fund v. DFC Glob. Corp.*, No. 13-6731, 2016 WL 4138613, at \*13 (E.D. Pa. Aug. 4, 2016) (“While Defendants’ strategy here appears to call into question Plaintiffs’ expert’s conclusions, Defendants have not tried to show that the market for DFC Global stock was inefficient”).

Finally, Defendants’ contention that Feinstein ignored whether Cassava stock was a meme stock or traded in an inefficient market is inaccurate. In both of his expert reports, Feinstein addresses the meme stock argument but concludes that Cassava was traded in an efficient market. Dkt. 148-7 at 21-69 (explaining why the Cassava market was efficient); Dkt. 209-5 at 26-66 (explaining why Stulz’s meme stock argument is unsupported and moot).

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*Ret. Sys. v. S. Co.*, 332 F.R.D. 370, 385-86 (N.D. Ga. 2019); *In re JPMorgan Chase & Co. Secs. Litig.*, 2015 WL 10433433, at \*6-\*7 (S.D.N.Y. Sept. 29, 2015); *In re Groupon, Inc. Secs. Litig.*, No. 12-C-2450, 2015 WL 1043321, at \*11 (N.D. Ill. Mar. 5, 2015), *objections overruled*, 2015 WL 13628131 (N.D. Ill. May 12, 2015).

The Court next considers whether Dr. Feinstein’s analysis of the *Cammer/Krogman* factors is sufficient to show that Cassava was traded in an efficient market during the Class Period. The Court finds that Plaintiffs offer sufficient evidence to show that the *Cammer/Krogman* factors support a finding of market efficiency.

**a. High Weekly Trading Volume**

The average trading volume is one of the most important factors in determining whether the market for a particular stock is efficient. *Enron*, 529 F. Supp. 2d at 692 n. 69. A large weekly volume of trades suggests significant investor interest in the company. “Such interest . . . implies a likelihood that many investors are executing trades on the basis of newly available or disseminated corporate information.” *Krogman*, 202 F.R.D. at 474 (quoting *Cammer*, 711 F. Supp. at 1286). Turnover measured by average weekly trading of two percent or more of the outstanding shares “would justify a strong presumption that the market for the security is an efficient one.” *Cammer*, 711 F. Supp. at 1286.

Feinstein’s Expert Report shows that Cassava common stock’s average weekly trading volume during the Class Period was 17.2 million shares, or 48.99% of the shares outstanding. Dkt. 148-7 at 28. Defendants do not dispute this. The Court finds that “Plaintiffs have demonstrated an average weekly trading volume far in excess of the two percent turnover courts have found to create a strong presumption of market efficiency and have satisfied the first *Cammer* factor.” *Rougier*, 2019 WL 6111303, at \*11.

**b. Number of Analysts and Media Coverage**

“The number of securities analysts following the company’s stock during the class period may offer ‘persuasive’ evidence of market efficiency because those investment professionals make buy or sell recommendations to their investor clients, and thereby help incorporate market information into the market price of the stock.” *Barbier*, 2013 WL 2443217, at \*7 (quoting *Cammer*, 711

F. Supp. at 1286). Plaintiffs offer evidence that six securities analysts covered Cassava during the Class Period. Dkt. 148-7 at 29. They also submit evidence that there was significant news coverage of Cassava during the Class Period. *Id.* at 30-31 (stating that 1,440 articles were published about Cassava during Class Period).

Defendants argue that Feinstein’s Expert Report “ignores that for most of the class period no more than four analysts covered the stock, and that all but two of these analysts dropped coverage before the end of the class period.” Dkt. 241 at 25. Plaintiffs respond that four analysts covered Cassava stock during the majority of the Class Period. Dkt. 209-5 at 72.

Courts have found three to four analysts plus media coverage sufficient to show market efficiency *See Buettgen v. Harless*, No. 3:09-CV-1049-K, 2011 WL 1938130, at \*7 (N.D. Tex. May 19, 2011) (four analysts); *In re DVI Inc. Secs. Litig.*, 249 F.R.D. 196, 209 (E.D. Pa. 2008) (three analysts plus media coverage), *aff’d*, 639 F.3d 623 (3d Cir. 2011). Moreover, Defendants “do not point to a case that says the number of analysts covering the stock must stay above a certain level throughout the class period.” *Malriat v. QuantumScape Corp.*, No. 3:21-CV-00058-WHO, 2022 WL 17974629, at \*8 (N.D. Cal. Dec. 19, 2022); *see also Barbier*, 2013 WL 2443217, at \*6 (“There is no requirement proposed class periods be analyzed in discrete chunks.”). The Court finds that the number of analysts and media coverage support a finding of market efficiency.

### **c. NASDAQ Listing and Market Makers**

“Most courts agree that whether a security is listed on the NASDAQ is a good indicator that the stock trades in an efficient market.” *Rougier*, 2019 WL 6111303, at \*11. The presence of many “market makers”<sup>11</sup> from sizable firms also suggests market efficiency. *Lehocky*, 220 F.R.D. at 508.

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<sup>11</sup> “A market maker is a firm that makes a market in a particular security by maintaining bid and ask prices and standing ready to buy or sell at these publicly-quoted prices.” *Lehocky*, 220 F.R.D. at 508 n.24.

Cassava stock traded on the NASDAQ exchange during the Class Period, and Plaintiffs submit evidence that there were 122 market makers active in Cassava stock during the Class Period. Dkt. 148-7 at 31-33. These facts support a finding of market efficiency. *See Rougier*, 2019 WL 6111303, at \*12 (finding that stock trading on NASDAQ and nine active market makers supported conclusion that stock traded in an efficient market).

#### **d. Form S-3 Eligibility**

SEC regulations permit certain companies to use the S-3 short form, rather than Form S-1, to register securities if they are large enough and have filed reports with the SEC. *Krogman*, 202 F.R.D. at 476. “Corporations permitted to use the S-3 form are thus presumed to be actively traded and widely followed. Therefore, a company’s ability to file an S-3 Registration Statement points to market efficiency.” *Id.* Cassava was eligible to file a Form S-3 throughout the Class Period and did so on February 10, 2021 and May 1, 2023. Dkt. 148-7 at 33-35. This factor supports a finding of market efficiency. *See Rougier*, 2019 WL 6111303, at \*12; *Krogman*, 202 F.R.D. at 476.

#### **e. Cause and Effect**

“[E]vidence of a causal relationship between unexpected corporate events or financial releases and an immediate response in the stock price is an important indicator of market efficiency.” *Krogman*, 202 F.R.D. at 477. Expert testimony on this issue “may be helpful because of the utility of statistical event analysis for this inquiry.” *Unger*, 401 F.3d at 325.

To demonstrate a causal relationship between Cassava’s news announcements and movements in Cassava’s stock price, Feinstein conducted empirical “event studies”<sup>12</sup> to determine whether the

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<sup>12</sup> An event study “is a statistical regression analysis that examines the effect of an event . . . on a dependent variable, such as a corporation’s stock price.” *Georgia Firefighters’ Pension Fund v. Anadarko Petroleum Corp.*, 99 F.4th 770, 773 n.1 (5th Cir. 2024) (citation omitted). Event studies are “widely accepted” evidence to show the impact of a particular event on a stock price. *Spence v. Am. Airlines, Inc.*, No. 4:23-CV-00552-O, 2024 WL 3092453, at \*17 (N.D. Tex. June 20, 2024); *see also Halliburton II*, 573 U.S. at 280 (stating that a party can “introduce evidence of the existence of price impact in connection with ‘event

market was efficient during the Class Period. He conducted three separate event studies using news events from Cassava Form 8-K filings, Cassava Form 8-K filings excluding earnings announcements, and the days with the highest count of news articles mentioning Cassava. Dkt. 148-7 at 39-54.

Results of the event studies showed a higher incidence of statistically significant returns on news event dates relative to all other dates. *Id.* at 52. For example, the studies showed that “there was a much greater frequency of statistically significant Cassava stock returns on 8-K event dates than on all other more ordinary days (19.5% versus 3.81%).” *Id.* They also showed that the “probability that eight of 41 8-K event days would be statistically significant if Cassava stock did not respond to information (such that Cassava stock behaved the same on news days and non-news days) is only 0.0306%.” *Id.* at 52-53. The event studies also showed that there was a much greater frequency of statistically significant Cassava stock returns on 8-K event dates excluding earnings announcements than “on all other more ordinary days (27.59% versus 3.75%),” *id.* at 53, and that “[t]he probability that this result could have occurred if Cassava stock behaved the same on news days and non-news days) is only 0.0021%,” *id.* at 53-54. And the event studies showed that “there was a much higher frequency of statistically significant Cassava stock returns on the top news article count days as compared to all other more ordinary days (34.29% versus 3.10%),” *id.* at 54, and “that the difference in the incidence of statistical significance for the top news article count days versus all other days, 34.29% versus 3.10%, is itself highly statistically significant.” *Id.*

Based on these results, Feinstein concludes: “The collective event study tests proved that there was a cause-and-effect relationship between new, Company-specific information and movements in the price of Cassava stock.” *Id.* at 55. Feinstein also conducted empirical tests on Cassava

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studies”); *Ludlow v. BP, P.L.C.*, 800 F.3d 674, 683 (5th Cir. 2015) (reviewing expert’s use of an event study, “that examine[d] the effect of an event on a dependent variable, such as a corporation’s stock price”).

options and concludes that there was a cause-and-effect relationship between Company-specific information and movement in the value of Cassava options. *Id.* at 58-65.

Defendants first argue that Feinstein's event studies are flawed and do not show market efficiency because he performed a "cursory" market efficiency analysis. Dkt. 241 at 16. The Court disagrees that Feinstein's 454-page Expert Report, 155-page Rebuttal Report, and detailed event studies therein are cursory. Courts have found similar event studies by Feinstein reliable to show a causal relationship between the release of company-specific news and movement in that company's stock price. *See, e.g., Monroe Cnty.*, 332 F.R.D. at 385-86 (finding that Feinstein's expert report and event studies were enough to show a cause-and-effect relationship between the announcement of company-specific news and movements in its stock price); *Groupon*, 2015 WL 1043321, at \*5 (finding that Feinstein's opinions and testimony on market efficiency were based on reliable data and methodology); *see also Rougier*, 2019 WL 6111303, at \*12 (finding that a similar event study by a different expert was enough to show a finding of a causal relationship between the release of company information and its stock price). Defendants' criticisms do not show a lack of causal relationship.

Defendants also argue that Feinstein's event studies do not show market efficiency because he did not consider other factors affecting stock price, such as high social media activity and the effect of high borrowing costs on the ability to short Cassava's stock during the Class Period. Feinstein did address such issues in his reports but did not find that they undermined his event studies.

"The Court need not exclude expert testimony simply because another expert claims to be able to poke holes in his opponent's methods." *Barbier*, 2013 WL 2443217, at \*9. That experts disagree on how to conduct studies or what factors to consider does not show that Feinstein's event studies

are unreliable. Defendants’ criticisms of Feinstein’s report can be “brought out through vigorous cross-examination and the presentation of contrary evidence.” *Id.*

The Court concludes that Feinstein’s event studies are sufficient evidence at this stage of the case to show a causal relationship between the release of Cassava news and movement in its stock price. *See Rougier*, 2019 WL 6111303, at \*12; *Monroe Cnty.*, 332 F.R.D. at 385-86; *Groupon*, 2015 WL 1043321, at \*5. This factor supports a finding of market efficiency.

#### **f. Market Capitalization**

Market capitalization, calculated as the number of shares multiplied by the prevailing share price, may be an indicator of market efficiency because there is a greater incentive for stock purchasers to invest in more highly capitalized corporations. *Krogman*, 202 F.R.D. at 478. During the Class Period, Cassava’s average market capitalization ranged from \$173.7 million to \$5.41 billion and averaged \$1.43 billion. Dkt. 148-7 at 35. This average market capitalization was larger than that of 71% of all publicly traded companies in the United States. *Id.* at 35-36. The sizable market capitalization of Cassava stock supports a finding that the market was efficient. *See Rougier*, 2019 WL 6111303, at \*13 (finding that market capitalization in top 45% was sufficient to show market efficiency); *Krogman*, 202 F.R.D. at 478 (finding that market capitalization in the top 60% was sufficient).

#### **g. Bid-Ask Spread**

The bid-ask spread is the difference between the price at which investors are willing to buy the stock and the price at which current stockholders are willing to sell their shares. *Krogman*, 202 F.R.D. at 478. “A large bid-ask spread is indicative of an inefficient market, because it suggests that the stock is too expensive to trade.” *Id.* Conversely, a narrow bid-ask spread is indicative of higher trading volume, which supports a finding of market efficiency. *Rougier*, 2019 WL 6111303, at \*13.

Cassava's bid-ask spread during the Class Period averaged 0.14%. Dkt. 148-7 at 37. This narrow spread supports market efficiency. *See In re Sci.-Atlanta, Inc. Secs. Litig.*, 571 F. Supp. 2d 1315, 1339 (N.D. Ga. 2007) (finding that a bid-ask spread that never exceeded 1.9% showed market efficiency).

#### **h. Float**

Float is the percentage of a corporation's shares that are held by the public rather than insiders. *Krogman*, 202 F.R.D. at 478. When stocks are predominately held by insiders, not the public, "stock prices are less likely to accurately reflect all available information about the security." *Id.* Therefore, a low float weighs against a finding of market efficiency, while a large float supports a finding of market efficiency. *Id.*; *Rougier*, 2019 WL 6111303, at \*13.

The public held 89.52% of Cassava stock during the Class Period. Dkt. 148-7 at 36. Courts consider this a large float, supporting a finding of market efficiency. *See McIntire v. China MediaExpress Holdings, Inc.*, 38 F. Supp. 3d 415, 433 (S.D.N.Y. 2014) (finding that a float of 57% to 69% supported market efficiency).

### **2. Defendants Do Not Rebut the Presumption of Reliance**

Because all the *Cammer/Krogman* factors favor a finding that Cassava Securities were traded in an efficient market during the Class Period, the Court concludes that Plaintiffs are entitled to a classwide presumption of reliance under *Basic*.

Defendants may rebut the *Basic* presumption by showing that an alleged misrepresentation did not actually affect the market price of the stock. *Goldman Sachs*, 594 U.S. at 119. The defendant bears the burden of persuasion to prove a lack of price impact and must carry that burden by a preponderance of the evidence. *Id.* at 126. Merely offering evidence that would support a finding of lack of price impact is not enough. *Id.* at 125. "The defendant must 'in fact' 'sever the link' between a misrepresentation and the price paid by the plaintiff—and a defendant's mere

production of *some* evidence relevant to price impact would rarely accomplish that feat.” *Id.* at 125-26 (quoting *Halliburton II*, 573 U.S. at 125, and *Basic*, 485 U.S. at 248). Defendants thus have the “daunting task” to prove by a preponderance of the evidence “that the publicly known statement had no price impact.” *Aranaz v. Catalyst Pharm. Partners Inc.*, 302 F.R.D. 657, 673 (S.D. Fla. 2014). Defendants have not carried this heavy burden.

Plaintiffs argue that Defendants’ alleged false and misleading statements had a price impact on Cassava stock. They present evidence that Defendants statements caused statistically significant increases in Cassava’s stock price on (1) September 14, 2020, when Defendants announced the “final” Phase 2b results; (2) February 2, 2021, when Defendants reported the results of an interim analysis from an open-label study extension of its Phase 2b trial; and (3) November 4, 2021, when Defendants claimed *The Journal of Neuroscience* found no evidence of data manipulation. Dkt. 176 ¶¶ 268-79, 289-90, 339-42; Dkt. 148-7 at 10-20, 59-65; Dkt. 209-5 at 113-15; Dkt. 242 at 347-92 (Ex. 17). Plaintiffs also point to evidence that Cassava made many corrective disclosures during the Class Period that were followed by statistically significant drops in Cassava stock. Dkt. 176 ¶¶ 322-37; Dkt. 148-7 at 10-20, 59-65; Dkt. 209-5 at 113-15; Dkt. 242 at 347-92.

Defendants contend that Plaintiffs fail to show price impact because “[e]ven of those seventeen corrective disclosures—which relate to the exact research Plaintiffs allege Defendants misrepresented—are not associated with any statistically significant decline in the price of Cassava’s stock.” Dkt. 241 at 28. Defendants rely on Stulz’s statements that

the majority of dates on which I understand that Plaintiffs allege corrective information came to the market are not associated with statistically significant price declines in any of Dr. Feinstein’s event study models. On such dates, there is no scientific basis to conclude that the price movements were not caused by random variation in the stock price.

Dkt. 242 at 71-72.

Defendants’ attempt to rebut the *Basic* presumption is flawed for two reasons. First, as the Honorable Sam Sparks explained in *Rooney*, this argument is statistically incorrect:

Defendants suggest the lack of a statistically significant price adjustment following a corrective disclosure shows that whatever price adjustment has occurred must be due to “random chance” rather than a predicate misrepresentation. But that is not how hypothesis testing works. A statistically significant price adjustment following a corrective disclosure is evidence the original misrepresentation did, in fact, affect the stock price. The converse, however, is not true—the absence of a statistically significant price adjustment does *not* show the stock price was unaffected by the misrepresentation. Nor does it indicate that what price adjustment did occur must be attributed to “random chance.”

330 F.R.D. at 450 (citations omitted); *see also Monroe Cnty.*, 332 F.R.D. at 395 (“A non-statistically significant decline simply does not ‘sever the link’ between the alleged misrepresentations and corrective disclosures.”).

More significantly, Defendants admit that there was a price impact on Cassava stock at least six times after disclosures. *See* Dkt. 242 at 73 (“[O]nly six of the nine alleged corrective disclosures discussed in the Feinstein Report are associated with statistically significant price declines in Dr. Feinstein’s three event study models, while the other three alleged corrective disclosures are not.”); *Monroe Cnty.*, 332 F.R.D. at 393 (“[B]ecause Defendants concede that a statistically significant price decline following an alleged corrective disclosure means one cannot rule out price impact . . . Defendants cannot prove an absence of price impact during the Class Period.”). Defendants also do not dispute that Cassava’s stock price climbed in response to the alleged misrepresentations made on September 14, 2020, February 2, 2021, and November 4, 2021. Defendants thus concede price impact and do not sustain their heavy burden to show *lack* of price impact. The questions of what causes the stock price to decline following corrective disclosures and increase due to misrepresentations, moreover, “are ultimate questions for the trier of fact on the merits.” *Id.*

Because Defendants do not rebut the *Basic* presumption, Plaintiffs are entitled to rely on the fraud on the market theory of reliance, and common issues of law and fact will predominate on the element of reliance. *Rooney*, 330 F.R.D. at 450.

### **C. Damages**

The Court next addresses whether common issues will predominate under the economic loss/damages element of Section 10(a). Plaintiffs must present a damages model “establishing that damages are capable of measurement on a classwide basis.” *Comcast Corp. v. Behrend*, 569 U.S. 27, 34 (2013). Generally, individualized damages calculations will not preclude a finding of predominance. *Ibe*, 836 F.3d at 529.

Even wide disparity among class members as to the amount of damages suffered does not necessarily mean that class certification is inappropriate, and courts, therefore, have certified classes even in light of the need for individualized calculations of damages. Class treatment, however, may not be suitable where the calculation of damages is not susceptible to a mathematical or formulaic calculation, or where the formula by which the parties propose to calculate individual damages is clearly inadequate.

*Bell*, 339 F.3d at 306-07 (citation omitted).

Plaintiffs will use the “out-of-pocket” damages model to calculate the individual and classwide damages stemming from the alleged fraud. Feinstein explains:

Out-of-pocket damages are the amount the investor overpaid for the security on account of the fraud, less any artificial inflation they recovered upon sale or disposition of the security. Therefore, for the common stock, out-of-pocket damages are measured as the difference between the amount of stock price inflation at purchase and the amount of inflation in the stock price at sale or, if held, at the end of the Class Period, taking into account formulaic prescriptions in relevant case law and statutes.

Dkt. 148-7 at 66. Feinstein opines that the out-of-pocket damages methodology is consistent with Plaintiffs’ theory of liability, can be applied commonly for all Proposed Class members, and “is

used to compute damages in virtually all securities class action cases.” *Id.* at 65. He explains that he will use event studies to calculate damages:

The methodology accommodates alternative potential determinations of liability with respect to specific alleged misrepresentations and omissions. Economic analyses, including valuation and empirical event study analysis, can be used to estimate the relationship between specific statements/omissions or sets of statements/omissions and the subsequent effect on security prices. This applies to artifices, affirmative statements, omissions, and/or corrective disclosures. As such, Class-wide damages in response to any specific misrepresentations and omissions ultimately established by Plaintiffs can be calculated in a straightforward manner common to all Class members.

*Id.* at 65-66.

Many courts recognize out-of-pocket damages models as an accepted way to calculate damages on a classwide basis in securities fraud class actions. *See Weiner v. Tivity Health, Inc.*, 334 F.R.D. 123, 137 (M.D. Tenn. 2020) (“Use of the out-of-pocket damages model . . . is the standard measurement of damages in Section 10(b) securities cases.”); *Rougier*, 2019 WL 6111303, at \*15 (“Plaintiffs have demonstrated an accepted method for calculating Class Members’ out-of-pocket damages that are consistent with a fraud on the market theory of liability”); *Rooney*, 330 F.R.D. 439 at 451 (finding that plaintiffs established that calculation of damages based on an out-of-pocket model could be measured on a classwide basis).<sup>13</sup>

Defendants argue that Plaintiffs do not show that damages can be calculated on a classwide basis because Feinstein’s proposed damages model is “vague, indefinite and unspecific,” and he does not specifically explain how he will calculate the damages and account for various factors,

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<sup>13</sup> *See also City of Cape Coral Mun. Firefighters’ Ret. Plan v. Emergent Biosolutions, Inc.*, HQ, 322 F. Supp. 3d 676, 693 (D. Md. 2018) (“The Court similarly finds that Lead Plaintiffs’ proposal of an event study to measure out-of-pocket per share damages meets their burden to show that damages can be calculated on a class wide basis.”); *In re Barrick Gold Secs. Litig.*, 314 F.R.D. 91, 105-06 (S.D.N.Y. 2016) (“[A]s required by *Comcast*, plaintiffs’ actual theory of damages (out-of-pocket damages) is entirely consistent with their theory of Section 10(b) liability and would be measurable on a class-wide basis.”).

such as that Cassava was a meme stock. Dkt. 241 at 35. This level of specificity is not required at the class certification stage. *Monroe Cnty.*, 332 F.R.D. at 399 (collecting cases). “It is sufficient for class certification that Professor Feinstein has specified a damages model that can be used to establish damages using a common methodology for all class members, even though certain of the inputs to that model are not yet ascertainable.” *Id.* The Court finds that Plaintiffs have proffered a damages model consistent with their theory of liability and capable of calculating damages on a classwide basis.

#### **D. Conclusion on Predominance**

For these reasons, Plaintiffs have shown that questions of law and fact common to the Class Members will predominate over any questions affecting only individual members.

### **VI. Superiority**

Finally, before certifying a class under Rule 23(b), the Court must find that “a class action is superior to other available methods for fairly and efficiently adjudicating the controversy.”

Rule 23(b)(3). The Court considers:

- (A) the class members’ interests in individually controlling the prosecution or defense of separate actions; (B) the extent and nature of any litigation concerning the controversy already begun by or against class members; (C) the desirability or undesirability of concentrating the litigation of the claims in the particular forum; and (D) the likely difficulties in managing a class action.

*Id.*

Defendants do not dispute that a class action is the superior method for adjudicating this case, and the Court finds this requirement satisfied. First, there is no evidence that any Class Member would prefer to prosecute his or her own claim, “especially since this is a sophisticated action involving extensive discovery that would be impractical for any one individual to control.” *In re Elec. Data Sys. Corp. Secs. Litig.*, 226 F.R.D. 559, 570-71 (E.D. Tex.), *aff’d sub nom. Feder v.*

*Elec. Data Sys. Corp.*, 429 F.3d 125 (5th Cir. 2005). Second, other than these consolidated cases, there are no known individual actions brought by class members concerning this controversy. Third, concentrating litigation in this forum is desirable because Cassava is headquartered in this District. *Rooney*, 330 F.R.D. at 451. Finally, aside from the usual complexities encountered in class action litigations, there are no apparent management difficulties from litigating these claims as a class instead of individually. *See Enron*, 529 F. Supp. 2d at 698 (“Any administrative difficulties in handling this class action are preferable to duplicating judicial resources in several individual lawsuits and denying access to the courts for class members.”). The Court finds that adjudicating this case as a class action is the superior method.

## VII. Conclusion on Motion for Class Certification

Because Plaintiffs meet all requirements under Rule 23 to certify this class action, this Magistrate Judge recommends that their Motion for Class Certification under Rule 23 should be granted. The Court also recommends that the District Court certify a class of all purchasers or acquirers of Cassava common stock or call options on Cassava common stock or sellers of put options on Cassava common stock (Cassava Securities) between September 14, 2020 and October 12, 2023.

## VIII. Recommendation

This Magistrate Judge **RECOMMENDS** that the District Court **GRANT** Plaintiffs’ Opposed Motion for Class Certification (Dkt. 148) and issue an Order (1) certifying this action as a class action under Rule 23(c); (2) appointing Plaintiffs as Class representatives; and (3) appointing Robbins Geller as Class Counsel under Rule 23(g).

## IX. Order

The Court **DENIES** Defendants’ Motion Requesting Evidentiary Hearing on Plaintiffs’ Motion for Class Certification (Dkt. 228).

The Court **FURTHER ORDERS** that this case be removed from the Magistrate Court's docket and returned to the docket of the Honorable David A. Ezra.

**X. Warnings**

The parties may file objections to this Report and Recommendation. A party filing objections must specifically identify those findings or recommendations to which objections are being made. The District Court need not consider frivolous, conclusive, or general objections. *See Battle v. United States Parole Comm'n*, 834 F.2d 419, 421 (5th Cir. 1987). A party's failure to file written objections to the proposed findings and recommendations contained in this Report within fourteen (14) days after the party is served with a copy of the Report shall bar that party from de novo review by the District Court of the proposed findings and recommendations in the Report and, except on grounds of plain error, shall bar the party from appellate review of unobjected-to proposed factual findings and legal conclusions accepted by the District Court. *See* 28 U.S.C. § 636(b)(1)(c); *Thomas v. Arn*, 474 U.S. 140, 150-53 (1985); *Douglass v. United Servs. Auto. Ass'n*, 79 F.3d 1415, 1428-29 (5th Cir. 1996) (en banc).

**SIGNED** on November 15, 2024.



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SUSAN HIGHTOWER  
UNITED STATES MAGISTRATE JUDGE